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TITLE: REGISTER ALLOCATION SYSTEM FOR COMPILER

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ABSTRACT:

PURPOSE: To prevent the generation of collision between a master loop global register and a slave loop transient register and to improve the execution performance of an object by forming a register list for registering slave loop transient registers reducing collision with master loop global registers as small as possible, and while referring the register list, allocating the slave loop transient registers successively extracted from the inside.

CONSTITUTION: A register numbers to be allocated to a slave loop reducing collision as much as possible by transient register allocation 4 correspondingly to a register number to be allocated to a master loop by global register allocation 3 are previously dynamically/statically registered in a register list 4-1. At the time of allocating the register numbers to the slave loops successively extracted from the inside of a center text by the transient register allocation 4, the register numbers in the list 4-1 are successively allocated in the descending order of register numbers. Since the slave loop transient registers are allocated so as to reduce collision with the master loop global registers as much as possible while referring the register list 4-1, the generation of collision between both the registers can be prevented.